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J. M. BACH

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BALL GAME

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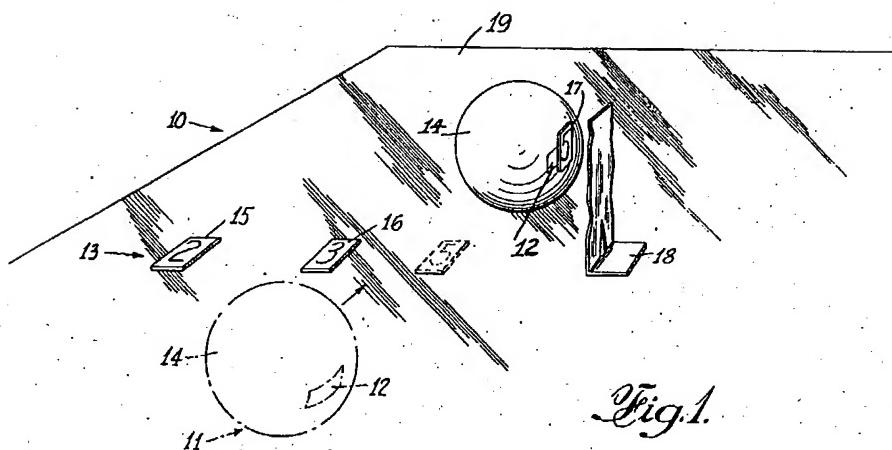


Fig. 1.

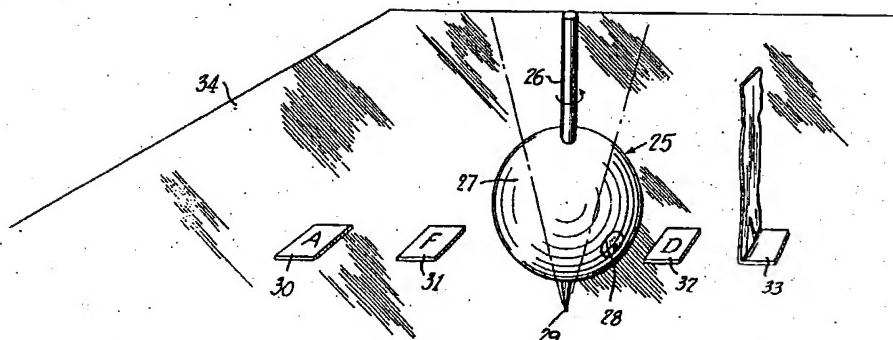


Fig. 2.

INVENTOR.  
JESSE M. BACH.

BY  
Leon M. Strauss

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## BALL GAME

Jesse M. Bach, Bronx, N. Y.

Original application February 24, 1940, Serial No. 320,615, now Patent No. 2,277,057, dated March 24, 1942. Divided and this application February 21, 1942, Serial No. 431,847

3 Claims. (Cl. 273—118)

This invention relates generally to games, toys, educational, scientific, advertising or like devices, and is preferably applicable to magnetic games employing a curved or spherical body, such as a ball.

This application is a division of my United States Patent No. 2,277,057, dated March 24, 1942.

It is a purpose of the present invention to provide a base, platform or game board, on and over whose surface a movable and rollable magnetic device, such as disclosed in the aforesaid U. S. patent, may influence either while in motion or at rest, magnetically susceptible objects placed on said board.

Another purpose of the present invention is to provide a magnetic game having a game board provided with demarcated areas and adapted to carry suitable objects of any desired configuration and design, on, near or over which areas and objects the aforesaid ball device may be rolled or manipulated to skim, displace, attract, roll with, and carry by magnetic action the thus magnetically adherent object or objects on the surface of said device from one point to another of said board and/or sweep said board partly or completely free of all said objects.

Yet, another advantage of the present invention resides in the provision of the combination of a suitable base or platform with the aforesaid rollable and movable device having magnetic and non-magnetic areas, whereby scientific and educational principles and results due to magnetic influences in curved and spherical bodies may be demonstrated or exhibited.

Still a further advantage of the present invention is to provide a game or the like having a platform upon which the aforesaid device may be placed and caused to roll, rock, swing, spin, jump or bounce, thereby influencing magnetically and/or physically suitable structures on said platform.

Yet, another advantage of the present invention is to provide in a game a top having magnetic areas for contact with and for attraction and displacement of suitable objects while said top is spinning or performing any suitable movement or comes to rest.

It is still another advantage of the present invention to provide a game with any suitable platform upon which one or more balls or devices of the aforesaid type may perform certain actions or movements with respect to each other and relatively to said board and objects placed thereon in upright or similar positions.

Still another aim of the invention resides in

the provision of a game or structure hereinabove referred to having a base or platform on which a curved or spherical body having any desired number of smaller or larger surface areas of magnetic and non-magnetic influences, of varying degrees and intensities of magnetic flux points, and of similar or dissimilar poles adjacent each other or spaced far apart, may be moved or be in a position of rest for the magnetic or non-magnetic influencing of suitable play pieces or other similar objects.

These and other objects and advantages of the invention will appear from the following disclosure thereof together with the attached drawing which illustrates certain forms of embodiments of the invention. The parts of which the invention consists can be variously changed and organized, and it is well understood that the invention is not limited to the precise embodiments herein set forth.

In the drawing: Fig. 1 illustrates schematically one embodiment of a game made in accordance with the invention. Fig. 2 shows an embodiment of the invention in modified form.

Referring now particularly to the drawing, there is disclosed in Fig. 1 a platform or game board 10 made of any suitable material, upon which a curved or spherical body, such as ball 11, provided with non-magnetic and magnetic parts for exerting magnetic energy at its surface, can be manipulated. The construction of such a ball is disclosed in greater detail in my U. S. Patent No. 2,277,057. The body 14 of ball 11 may consist of wood, rubber, plastic composition or of any non-magnetic material and has magnet means 12 or any magnetic part or parts of predetermined shape inserted or incorporated in said material and surface of ball 11, thereby providing and presenting for the purpose of the game non-magnetic and magnetic surface portions which may vary in size, shape, number, and strength depending upon the size and strength and desired conditions and qualities of the magnet means. The purpose of such a game structure is to enable the player to roll one or more of said balls upon the game board 10, whereby magnetic energy is utilized, and to use skill and dexterity in rolling and manipulating said ball on the game board so that the ball may coact with play pieces 15, 16, 17, etc., of metals susceptible of being magnetically influenced by the magnet or magnets in ball 11 and with the board and designated areas of row 13 on it. The player is also enabled to take advantage of haphazard movements, (rocking, spinning, skimming and

bouncing and similar motions of the ball) for game action, scoring, and amusements. Any small or large novel game may thus be developed in which said ball may be brought into action, with any kind, shape, size and configuration of suitable metallic play pieces 15, 16, 17, etc., such as arranged, for example, in row 13. The play pieces may be placed on the platform surface 19 in any desired manner, location or arrangement, the pieces carrying any desired design, lettering, coloration, or indicia, such as identifying numbers "2," "3," "5," etc. These various identifying symbols may be used for various kinds of different games to assign certain points, scores, plays, amusements and criteria of skill depending upon which piece or pieces the ball attracts, picks up, and carries, or otherwise magnetically influences.

If ball 11 is rolled on the board 10 holding said play pieces 15, 16, 17, 18, the ball by its magnetic energy may attract the piece on contact with the magnetic part or may cause the piece to jump towards the ball even without contact if the magnetic part is powerful enough and will then carry the piece, by its magnetism and momentum off the initial position of the piece, and towards a desired end of the game board 10. At times the ball will drop off one or more attracted pieces during its movement, because the speed of the rolling ball and its centrifugal force overcomes the magnetic attraction, or because the friction of the play piece with the game board may dislodge and detach the play piece from its attracting magnetic part.

Where the magnetic part or parts of the ball surface are small and/or weak, a game results where ball movements attract only light play pieces or only one or a few, and when the ball surface has many or strong magnetic parts, games may be created wherein the ball may sweep off many or relatively large play pieces by said magnetic parts in one or a few rolling movements.

Where the ball has inserted and embedded in it several magnets, in such locations that their poles are equidistant from each other on the ball surface, and the intermediate non-magnetic areas are all equal in size, a game may be provided wherein for all practical purposes, game scores and amusement, the rolling ball is given the best chance of contacting, attracting and carrying the play pieces.

Where the play pieces on the game board are quite large, and relative to the ball heavy or larger in size and area, it is obvious that when the ball contacts such a large play piece or sheet of magnetic material, the latter may magnetically catch the ball and arrest its rolling action.

Where more than one ball is rolled on the game board, a magnetic part of each ball may coat with a magnetic part of the other, to effect various magnetic reactions. The balls may attract each other, roll together, or may cause any other expected or unexpected movements.

It will easily be realized that the ball or other curved magnetic device described in U. S. Patent No. 2,277,057, may be rolled, shot, ejected, thrown, and/or otherwise set into motion upon the game board by means other than the player's hand. Such means may be any known means (not shown) like spring ejectors, imitation guns, miniature bats and sticks, and so on, and the movements and actions of the ball on the board may be repeated by the same mechanism.

In certain games, upright play pieces 18 with a supporting base may be used as shown in Figs. 1 and 2. These pieces may be placed so that their edges face the player, the ball being rolled towards the large area of the play piece in an attempt to have a magnetic part of the ball skim and contact said area. Where the upright play piece is struck and skimmed by a non-magnetic area of the ball, the object may simply be thrown over without any magnetic actions occurring. If the piece is placed so that its large face faces the location from which the player rolls the ball, then it is apparent that the ball may strike the face directly, influence it magnetically, or throw down, and then attract, or otherwise magnetically influence such displaced piece. If a ball is used with powerful magnetic pole or poles on the ball surface, then when such skimming action occurs past the piece even without any contact, magnetic action may be strong enough so that the piece jumps towards said pole on the ball surface, adheres to it, and be dragged along on the game board towards a predetermined area or goal. Magnetic skimming actions, whereby upright play pieces of suitable materials are magnetically displaced without attracting actions create very interesting and highly amusing game plays.

Referring now again to the drawing, there is disclosed in Fig. 2 another form of embodiment of the invention than that shown in Fig. 1, wherein a top 25 having a handle 26, a curved part 27 carrying the magnet 28 in its surface, and a pivot 29 may be made to spin on a game board 34 and coat magnetically with play pieces 30, 31, 32, 33.

It is to be noted that the structure of the ball part of the top 25 may correspond to any of the curved body structures shown and described in my U. S. Patent No. 2,277,057. A wobbling motion (indicated by dot-dash lines) will occur toward the end of the usual spinning motion of the top 25, whereby magnetic actions will occur, if the magnet 28 contacts one of the play pieces 30 to 33, which are made of magnetically susceptible material, such as sheet iron.

If the top 25 skims weakly past upright object or piece 33, the latter will be attracted or displaced by the magnetic influence of magnet piece 28 or the top may hit the play piece 33 and first strike it down and then attract the same by magnet 28 if the top rolls or wobbles toward the struck piece 33.

During the early or strongly spinning action of the top, the centrifugal force of its rotating body may be strong enough to prevent its magnetic influence upon the play piece, unless a very powerful magnet is used.

It will be realized that the invention may be applied to other purposes besides toys and games, such as the scientific demonstration, exhibition and utilization of magnetic phenomena of a curved body on a base in combination with other curved bodies and/or suitable pieces and objects. For educational purposes the device may be utilized in its spherical form and in its variations and different embodiments, for example, for demonstrating magnetism while rolling. It may be applied to display and advertising purposes as, for instance, where the rolling ball or body equipped with magnetic means may be utilized for magnetically influencing any configuration showing manufactured items on a suitable base or platform.

It can thus be seen, that depending upon the

size and kind of game board, the configuration, location, and relation of the play pieces to the game board and the mentioned predetermined areas thereon, the size of the ball or other suitable device, the construction, arrangement, polarity and strength of the magnet parts on its surface, and the size and arrangements of the non-magnetic areas in the said surface and the kind of non-magnetic material used, and the skillful or haphazard rolls and throws caused by the player, a great number of diversified actions, plays and reactions may occur.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a game of the character described having a body provided with a curved surface carrying non-magnetic and magnetic portions; a game board, and at least one substantially upright play piece of magnetically susceptible mass positioned on said game board and adapted to coat with said body for scoring purposes, said play piece extending above the surface of said game board and to such height that when said body engages said play piece during movement of said body on said game board said play piece may be either physically displaced and pushed away from its initial position on said game board by the non-magnetic portion or magnetically influenced by said magnetic portion of said body

30

depending upon which of the portions of said body comes in engagement with said play piece during said movement of said body.

2. A device of the character described having a body with a curved surface of magnetic and non-magnetic parts; a board, and at least one play piece placed on said board and made of magnetically susceptible material, said play piece having a portion supported on the surface of said board and being provided with a projection extending from said portion thereabove, said body coating magnetically and physically with said play piece depending upon the relations of the area and number of the magnetic and non-magnetic parts, respectively, to the play piece on said board.

3. A device of the character described consisting of a spinning top with a curved surface of magnetic and non-magnetic parts; a board, and at least one play piece placed on said board and made of magnetically susceptible material, said play piece having a portion in contact with the surface of said board and being provided with a projection extending from said portion thereabove, said top coating magnetically and physically with said play piece depending upon the relations of the area and number of the magnetic and non-magnetic parts, respectively, to the play piece on said board.

JESSE M. BACH.